



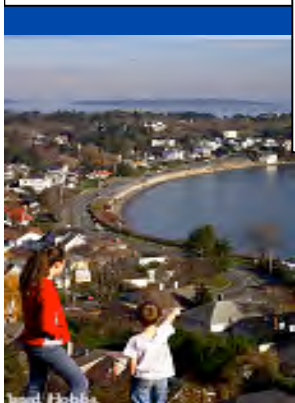
Ministry of
Healthy Living
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Review of Air Quality Best Management Practices

Land Use, Transportation & Air Quality:
Making Healthier Decisions

October 27, 2009



Overview

- Review best management practices for land use and transportation planning to:
 - Reduce emissions of air pollutants
 - Reduce exposure to air pollutants
- Focus on B.C. and California guidelines:
 - Develop With Care
 - CARB Air Quality and Land Use Handbook



Develop With Care

Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia



March 2006



- Developed by MOE to provide province-wide guidelines for maintaining environmental values during the development of urban and rural lands
- Intended for those who set stage for development, and those who design, build or approve developments
- Focuses on community planning and site development/management

Objectives For Community Planning

- Include air quality goals in community plans
- Develop bylaws to protect local air quality
- Provide setbacks from major transportation routes

Community Planning – AQ Goals

- Recognize air quality in OCP's as a step to avoiding incompatible land uses (such as polluting sources near schools, hospitals and residences)
- Develop airshed plans that address cumulative impacts from pollution sources within an airshed or community

Community Planning – Bylaw Development



- Require new or replacement wood-burning appliances meet B.C. standards
- Ensure all open burning is conducted in accordance with legislative requirements
- Control or prohibit residential backyard burning
- Prohibit burning in residential neighbourhoods during air quality advisories except where wood is primary heating source
- Enact motor vehicle anti-idling bylaws

For inventory of air quality bylaws in B.C. for anti-idling, open burning and wood-burning appliances, see:

http://www.bcairquality.ca/reports/pdfs/aq_bylaws_bc.pdf

Community Planning -- Transportation Setbacks



Source: <http://sensible transportation.org>

- Based on recommendations by Nethery and Brauer (2006)
- Provide minimum 150 m setback from busy roads for schools, hospitals, long-term care facilities and residences
- Add additional setbacks for buildings located along major truck routes
- Avoid creating street canyons which can trap air pollution

Objectives for Site Development and Management



- Locate buildings to avoid air quality concerns
- Protect air quality during development

Guidelines for Building Location



Source: Google Maps

- Place building air intake systems away from loading docks and congested traffic corridors
- Where unavoidable, use HEPA cleaners (single-room) or centralized filtration units
- Retain, plan and maintain healthy trees to filter contaminants from air and moderate temperatures

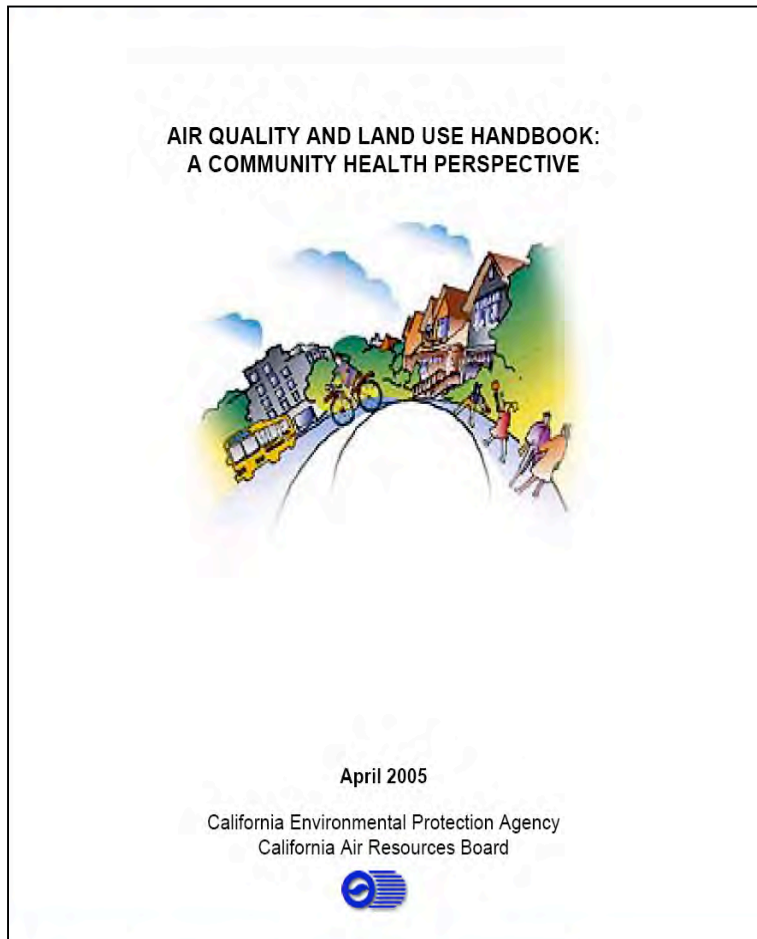
Guidelines to Protect Air Quality During Development



Source: Jonathan Hayward/Canadian Press

- Require paved traffic areas for new industrial and commercial developments to reduce dust
- When clearing land, leave downed wood in buffer areas rather than burning as waste
- Remind construction workers to turn off vehicles while working or visiting site

California Air Quality and Land Use Handbook



- Provides recommendations on siting new sensitive land uses
- Identifies approaches to prevent or reduce potential air pollution impacts
- Improves and facilitates access to air quality data and evaluation tools
- Encourages stronger collaboration
- Emphasizes community outreach approaches

Sensitive Land Uses

- Residences
- Schools
- Day care centres
- Playgrounds
- Medical facilities



Siting Recommendations for Sensitive Land Uses

- Freeways and high-traffic roads (>500 ft)
- Distribution centres (>1000 ft)
- Rail yards (>1000 ft)
- Ports (avoid immediately downwind)
- Refineries (avoid immediately downwind)
- Chrome platers (>1000 ft)
- Dry cleaners using perc (>300-500 ft)
- Gasoline dispensing facilities (>300 ft)

For details, see: <http://www.arb.ca.gov/ch/handbook.pdf>



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Summary

Planning and regulatory tools available to protect local air quality:

- Introduce air quality goals into local plans
- Develop bylaws to avoid incompatible land uses and limit emissions from local sources
- Use setbacks to guide placement of sensitive land uses



References

B.C. Ministry of Environment “Develop With Care”:

http://www.env.gov.bc.ca/wld/documents/bmp/devwithcare2006/develop_with_care_intro.html

California “Air Quality and Land Use Handbook”:

<http://www.arb.ca.gov/ch/handbook.pdf>

San Francisco Air Quality Assessment and Ventilation Requirements:

<http://www.sfdph.org/dph/EH/Air/default.asp>

Sacramento “Model General Plan Air Quality Element”:

<http://www.airquality.org/lutran/ModelAQElement.pdf>

Fraser Basin Council “Transportation Demand Management: A Small and Mid-Size Communities Toolkit”:

<http://www.fraserbasin.bc.ca/programs/tdm.html>





More References

- Inventory of Air Quality Bylaws in British Columbia for Anti-Idling, Open Burning and Wood-burning Appliances:
http://www.bcairquality.ca/reports/pdfs/aq_bylaws_bc.pdf
- Green Fleets BC: <http://www.greenfleetsbc.com/>
- Idle Free BC: <http://www.idlefreebc.ca/>
- HASTE: <http://www.hastebc.org/>
- West Coast Environmental Law Clean Air Bylaws Guide
<http://www.wcel.org/wcelpub/2006/14251.pdf>
- B.C. Ministry of Environmental Provincial Framework for Airshed Planning:
http://www.bcairquality.ca/reports/pdfs/airshedplan_provframework.pdf
- Air Quality Planning Tool <http://www.airqualityplanning.ca/>



Thank You!

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Develop With Care -- Checklist for Community Development

- For use by local governments to help determine if environmental issues are being addressed in the OCP and other strategic planning processes
- Contains handful of air quality-related questions

Develop With Care -- Checklist for Community Development

- Do the OCP goals address the full spectrum of environmental concerns, including protection of air quality?
- Does the OCP address air quality issues?
 - Does the OCP promote alternatives to driving?
 - Are there programs to provide alternatives to backyard burning (e.g. composting of yard waste)?

Develop With Care -- Checklist for Site Development

- Are buildings sited to avoid air quality concerns?
- Is air quality being protected during construction?

Air Quality Element



- Used by a number of California communities to
 - Explain role of the local jurisdiction in protecting air quality
 - Emphasize significance of land use patterns and resulting transportation behaviour on air quality
- Typically includes strategies related to land use and transportation

Air Quality Element -- Examples of Land Use Strategies

- Environmental Justice
- Land Use Patterns for Businesses
- Smart Growth Planning
- Project Design Guidelines

Air Quality Element -- Examples of Transportation Strategies

- Trip Reduction
- Transportation Demand Management
- Encourage use of low-emission vehicles
- Advocacy